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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**Docket Number (Optional)  
8540G-000083/COB

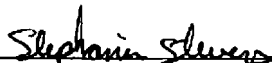
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Application Number  
10/791,428Filed  
March 2, 2004

On March 31, 2009

First Named Inventor  
William S. Wheat

Signature

Art Unit  
1795Examiner  
Cynthia K. Lee

Typed or printed name Stephanie Stevens

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

X

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)☐ attorney or agent of record.  
Registration number \_\_\_\_\_☒ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 34,754

Signature

Michael D. Wiggins  
Typed or printed name248-641-1600  
Telephone numberMarch 31, 2009  
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☐ \*Total of \_\_\_\_\_ forms are submitted.

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/791,428  
Filing Date: March 2, 2004  
Applicant: William S. Wheat  
Group Art Unit: 1795  
Examiner: Cynthia K. Lee  
Title: FUEL CELL ENERGY MANAGEMENT SYSTEM FOR  
COLD ENVIRONMENTS  
Attorney Docket: 8540G-000083/COB

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Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

Applicants request a Pre-Appeal Brief Conference and contend that Mufford et al., U.S. Pat. No. 6,186,254, fails to disclose a controller that controls a hydrogen supply and an air supply to power a heater to warm a fuel cell stack and a water supply while a vehicle is not running.

### **STATUS OF CLAIMS**

Claims 23, 24, and 26 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mufford (U.S. Pat. No. 6,186,254). Claim 25 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mufford in view of Nakanishi (U.S. Pat. No. 6,592,741). Claim 29 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mufford in view of Wells (U.S. Pat. App. No. 2004/0192467). Claims 27-28, 30-34, and 47-53 are allowed.

### **SUMMARY OF CLAIMED SUBJECT MATTER**

Independent claim 23 describes an energy management system for controlling the temperature of a fuel cell system of a vehicle. The energy management system comprises a fuel cell stack, an air supply, a water supply, a hydrogen supply, a heater, and a controller.

The air supply provides air to the fuel cell stack. The heater is connected to an output of the fuel cell stack and is arranged to warm the fuel cell stack and the water supply. The heater is external to the fuel cell stack. The controller controls the hydrogen supply and the air supply to power the heater and warm the fuel cell stack and the water supply while the vehicle is not running.

### **ARGUMENT**

With respect to claim 23, Applicants assert that Mufford fails to disclose a controller that controls **a hydrogen supply and an air supply to power a heater** to warm a fuel cell stack and a water supply **while the vehicle is not running**.

Applicants initially assert that the Examiner's refusal to consider Applicants argument is improper. More specifically, the Examiner now refuses to consider

Applicants' argument that Mufford fails to disclose a controller according to the limitations of claim 23. (See Continuation Sheet of Advisory Action dated Mar. 19, 2009). The Examiner reasons and alleges that Applicants did not present the above argument during earlier prosecution. (See Continuation Sheet of Advisory Action dated Mar. 19, 2009).

Applicants raised the argument presented above with respect to Mufford as early as February 29, 2008. (See pp. 7-9 of Applicants' Amendment dated Feb. 29, 2008). Applicants raised the issue on another occasion in Applicants' Amendment dated May 16, 2008. (See pp. 8-10). Applicants raised the issue on yet another occasion in Applicants' Response dated October 24, 2008. (See pp. 2-3). Applicants have even bolded the portions of the above argument that the Examiner now refuses to consider on at least one occasion. (E.g., see pp. 2-3 of Applicants' Response dated Oct. 24, 2008).

Therefore, contrary to the Examiner's allegations, Applicants have previously raised the argument presented above. The Examiner's refusal to consider the validity of the argument is therefore improper, and Applicants respectfully request consideration of the argument presented.

Further, Applicants assert that Mufford fails to disclose a controller that controls a **hydrogen supply and an air supply to power a heater** to warm a fuel cell stack and a water supply **while the vehicle is not running**.

Instead, as best understood by Applicants, Mufford teaches controlling hydrogen and air supplies to power a heater **while the vehicle is running** and controlling **shore**

**power** to power the heater while the vehicle is not running. Regarding powering the heater while the vehicle is running, Mufford states that:

[f]uel cell power may be advantageously used to power the resistor **soon after start-up** to bring the fuel cells tack 30 within the preferred operating temperature range and **during operation** to improve fuel cell performance by maintaining the fuel cell stack 30 within the preferred temperature range especially when the motor vehicle is operated in cool ambient temperatures.

(See column 4, lines 38-46)(emphasis added). In other words, Mufford applies fuel cell stack power to the resistor to warm the fuel cell stack **while the vehicle is running**. In this manner, Mufford controls hydrogen and air supplies to power the heater while the vehicle is running.

Regarding powering the heater while the vehicle is not running, Mufford states that the heater 70 “may be connected to receive electricity from **shore power** from, for example, **a shore power circuit 90**, thereby allowing the resistor to function as an block heater that prevents the fuel cell stack from freezing and facilitates start-up in cold weather.” (See column 4, lines 33-38) (emphasis added). In other words, Mufford controls application of **shore power** to power the heater (i.e., the resistor 70) while the vehicle is not running.

The Examiner fails to recognize, however, that Mufford teaches controlling **shore power** to power the heater while the vehicle is not running – not controlling **a hydrogen supply and an air supply** to power the heater as claim 23 recites.

Therefore, Applicants assert that Mufford fails to teach a controller that controls **a hydrogen supply and an air supply to power a heater** to warm a fuel cell stack and a water supply **while the vehicle is not running** as claim 23 recites.


Applicants note that the standard for anticipation under 35 U.S.C §102(b) is clear - all of the limitations of the claim must be inherent or expressly disclosed and must be arranged as in the claim. Constant v. Advanced Micro-Devices, Inc., 7 USPQ.2d 1057 (Fed. Cir. 1988). There must be no difference between the claimed invention and the reference disclosure as viewed by one skilled in the field of the invention. Scripps Clinic & Res. Found. V. Genentech, Inc., 18 USPQ.2d 1001 (Fed. Cir. 1991).

Accordingly, claim 23 is allowable for at least the above reasons. Claims 24-34 ultimately depend from claim 23 and, therefore, are allowable for at least similar reasons.

HARNESS, DICKEY, & PIERCE, P.L.C.

Dated: March 31, 2009

By:

  
Michael D. Wiggins  
Reg. No. 34,764

**Harness, Dickey & Pierce, P.L.C.**  
**5445 Corporate Drive, Suite 200**  
**Troy, MI 48098**

MDW/DMA/NSD/cn